AMENDMENTS TO THE CLAIMS

Please cancel Claims 3-5, 8-10, 12, 14-26; amend Claim 1-2 & 13

Claim 1 (Currently Amended)

An open wireless architecture (OWA) for fourth generation mobile communications said system comprising:

a) a wireless communication terminal device supporting different wireless open air interfaces in the same device with same unique identifier ~~based on open Air-Interface BIOS (basic input/output system) signal processing architecture~~ and capable of communicating with other devices, systems or networks through said open Air-Interfaces,

b) an open computer system equipped with full networking facilities to access various different backbone networks either through wireline networking interfaces or through broadband wireless communication systems of said open Air-Interfaces,

c) an open base transceiver system supporting various different air interfaces ~~based on said open Air-Interface BIOS signal processing architecture~~ to interconnect said wireless communication terminal device through said open Air-Interfaces,

d) said base transceiver system connecting to said computer system wirelinely to construct the open base-station as a whole,

e) said wireless terminal device connecting to different wireline networks through its wireline Network Interface Unit (NIU) in said wireless terminal device,

f) said base-station connecting to other said base-station either over the wireline networks or over broadband wireless access system through said computer system, or through said base transceiver system of said open Air-Interfaces in an ad-hoc mode, and

g) said wireless terminal device connecting directly to other said wireless terminal device through said open Air-Interfaces in an ad-hoc mode.

Claim 2 (Currently Amended)

The Open Wireless Architecture (OWA) for fourth generation mobile communications of claim 1 wherein: both said wireless terminal device and said base-station further comprising:

a) ~~an open processing engine processing the signals and protocols of said open Air-Interfaces,~~

b) ~~a reconfigurable and open digital converter transforming the received analog signals to the digital base-band signals and vice verse, and connecting to said open processing engine,~~

c) a programmable and open radio frequency (RF) module and smart antenna processing module of different frequencies supporting said open air-interfaces, and connecting to ~~said~~ an open digital converter,

d) a software definable module (SDM) containing processing parameters, algorithms and protocols of said open air-interfaces to be stored in an internal memory, external memory card or downloaded from networks, and

e) an open wireless BIOS (basic input/output system) signal processing architecture capable of providing the common and open interfaces to said processing engine, said digital converter, said RF module and said SDM, and mapping said open air interfaces into different interface parameters of said signal processing architecture.

Claim 3-5 (Cancelled)

Claim 6 (Previously Amended)

A system as recited in claim 1 wherein said base station can be reconfigured and re-programmed as wireless router of said open air-interfaces by integrating said interface parameters through said open wireless BIOS signal processing architecture.

Claim 7 (Previously Amended)

A system as recited in claim 1 wherein said base station can be reconfigured to be a mobile base-station that said computer system connecting to said backbone networks through said broadband wireless communication systems instead of said wireline networking interfaces.

Claim 8-10 (Cancelled)

Claim 11 (Previously Amended)

A system as recited in claim 2 wherein said open wireless BIOS signal processing architecture further defining the basic interface structure for said open air-interfaces, said open air-interfaces switching, said open system modules as well as switching between internal and external open modules of said open air-interfaces.

Claim 12 (Cancelled)

Claim 13 (Currently Amended)

A system as recited in claim 2 wherein said software definable module of said open air-interfaces in said wireless terminal device can be stored in or installed from said external memory card, or downloaded through said network interface unit (NIU) of said wireless terminal device based on said open wireless BIOS signal processing architecture.

Claim 14-26 (Cancelled)